

What is claimed is:

1. A brake system for a heavy vehicle, comprising:
 - a plurality of brake components;
 - at least one vehicle performance sensor;
 - a central control unit receiving sensor signals from said at least one vehicle performance sensor and generating central control signals for controlling said plurality of brake components based on the received sensor signals;
 - a distributed electronic control unit receiving sensor signals from said at least one vehicle performance sensor and generating local control signals for controlling only some of said plurality of brake components based on the received sensor signals; and
 - a conflict resolution scheme for resolving conflicts between the central control signals and the local control signals.
2. The brake system of Claim 1 wherein said central control unit comprises:
 - a first control scheme used by said central control unit for generating first central control signals;
 - a second control scheme used by said central control unit for generating second central control signals; and
 - a central control unit conflict resolution scheme used by said central control unit for resolving conflicts between the first and second central control signals.

3. The brake system of claim 2 wherein said central control unit conflict resolution scheme comprises part of one or both of said first and second control schemes.
4. The brake system of Claim 1 wherein said distributed electronic control unit comprises:
 - a first control scheme used by said distributed electronic control unit for generating first local control signals;
 - a second control scheme used by said distributed electronic control unit for generating second local control signals; and
 - a distributed electronic control unit conflict resolution scheme used by said distributed electronic control unit for resolving conflicts between the first and second local control signals.
5. The brake system of claim 4 wherein said distributed electronic control unit conflict resolution scheme comprises part of one or both of said first and second control schemes.
6. The brake system of claim 1 further comprising a manual input for overriding the central control signals and the local control signals.

7. The brake system of claim 1 further comprising a source of pressurized air for use in actuating the brake component.
8. The brake system of claim 1 further comprising a source of electrical energy for use in actuating the brake component.
9. The brake system of claim 1 wherein said conflict resolution scheme is configured in a form selected from the group consisting of hardware, software, firmware, a pluggable module and combinations of these.
10. A brake system for a heavy vehicle, comprising:
 - a first brake component comprising a first type of brake component;
 - a second brake component comprising a second type of brake component;
 - at least one vehicle performance sensor;
 - a central control unit receiving sensor signals from said at least one vehicle performance sensor;
 - a first control scheme used by said central control unit for generating central control signals for controlling said first brake component;
 - a second control scheme used by said central control unit for generating central control signals for controlling said second brake component; and

a distributed electronic control unit receiving sensor signals from said at least one vehicle performance sensor and generating local control signals for controlling at least one of said first and second brake components.

11. The brake system of Claim 10 further comprising a conflict resolution scheme for resolving conflicts between the central control signals and the local control signals.

12. The brake system of claim 11 wherein said conflict resolution scheme comprises part of one or both of said first and second control schemes.

13. The brake system of claim 11 wherein said conflict resolution scheme is configured in a form selected from the group consisting of hardware, software, firmware, a pluggable module and combinations of these.

14. The brake system of Claim 10 wherein said distributed electronic control unit generates local control signals for controlling only one of said first and second brake components.

15. The brake system of Claim 10 wherein said distributed electronic control unit comprises:

a first control scheme used by said distributed electronic control unit for generating first local control signals;

a second control scheme used by said distributed electronic control unit for generating second local control signals; and

a distributed electronic control unit conflict resolution scheme used by said distributed electronic control unit for resolving conflicts between the first and second local control signals.

16. The brake system of claim 15 wherein said distributed electronic control unit conflict resolution scheme comprises part of one or both of said first and second control schemes.

17. The brake system of claim 10 further comprising a manual input for overriding the central control signals and the local control signals.

18. The brake system of claim 10 further comprising a source of pressurized air for use in actuating the brake component.

19. The brake system of claim 10 further comprising a source of electrical energy for use in actuating the brake component.

20. The brake system of claim 10 wherein at least one of said first and second control schemes is configured in a form selected from the group consisting of hardware, software, firmware, a pluggable module and combinations of these.

21. A brake system for a heavy vehicle, comprising:

- a plurality of brake components;

- at least one vehicle performance sensor;

- a central control unit receiving sensor signals from said at least one vehicle performance sensor and generating central control signals for controlling said plurality of brake components based on the received sensor signals;

- a distributed electronic control unit receiving sensor signals from said at least one vehicle performance sensor and generating local control signals for controlling only some of said plurality of brake components based on the received sensor signals; and

- a central supply network for supplying energy to said plurality of brake components for actuating said plurality of brake components in response to the central and local control signals.

22. The brake system of Claim 21 further comprising a conflict resolution scheme for resolving conflicts between the central control signals and the local control signals.

23. The brake system of Claim 21 wherein said central control unit comprises:

a first control scheme used by said central control unit for generating first central control signals;

a second control scheme used by said central control unit for generating second central control signals; and

a central control unit conflict resolution scheme used by said central control unit for resolving conflicts between the first and second central control signals.

24. The brake system of claim 23 wherein said central control unit conflict resolution scheme comprises part of one or both of said first and second control schemes.

25. The brake system of Claim 21 wherein said distributed electronic control unit comprises:

a first control scheme used by said distributed electronic control unit for generating first local control signals;

a second control scheme used by said distributed electronic control unit for generating second local control signals; and

a distributed electronic control unit conflict resolution scheme used by said distributed electronic control unit for resolving conflicts between the first and second local control signals.

26. The brake system of claim 25 wherein said distributed electronic control unit conflict resolution scheme comprises part of one or both of said first and second control schemes.

27. The brake system of claim 21 further comprising a manual input for overriding the central control signals and the local control signals.

28. The brake system of claim 21 wherein said central supply network comprises a source of pressurized air.

29. The brake system of claim 21 wherein said central supply network comprises a source of electrical energy.